UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/535,984	03/27/2000	Toshiro Obitsu	1614.1045	4143

21171 7590 12/21/2004

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
TRUJILLO, JAMES K	
ART UNIT	**PAPER NUMBER**
2116	

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/535,984	OBITSU, TOSHIRO	
	Examiner	Art Unit	
	James K. Trujillo	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,6-14 and 16-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,6-14 and 16-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The office acknowledges the receipt of the following and placed of record in the file: Amendment dated 9/22/2004.

2. Claims 1, 4, 6-14 and 16-20 are presented for examination. Applicant have canceled claims 2, 3 and 15.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 6, 10, 14 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Oprescu et al., U.S. Patent 5,483,656 (hereinafter Oprescu).

5. As to claim 1, Oprescu teaches an electronic apparatus (host, figure 1), comprising:

a. a judging part (CPU used a power manager within a portable computer) judging whether a combination of plurality of units (target device, inter alia a disk drive 16) is to realize a desired function (such as at accessing stored data on a disk drive, col. 7 line 49 et seq., figure 1), said units being detachable from said electronic device (devices are connectable to via a bus, col. 4 lines 26-33);

b. a power supply control part (power manager 50) controlling a supply of power from a power source (battery 26 or AC power 34) to at least one of said units (supplying power to a device for example a disk drive, col. 6 lines 15-20) of said combination (certain devices operate simultaneously, col. 5 lines 21-37) used to realize said desired function

based on a judgment result of the judging part, based on an aspect of said combination of the plurality of units (as a result of devices operating simultaneously to perform some action).

c. an identification information obtaining part obtaining identification information from said plurality of units (database receiving and storing information on all devices, figure 2 and col. 7 lines 12-20);

d. an information judging part judging whether said desired function (for example the CPU requires data stored on a disk drive) is realized based on the identification information obtained from said plurality of units (col. 7 lines 21-60);

e. wherein said combination of said plurality of units is determined from the identification information (the combination of units is identified using the database holding the information on all the devices, col. 8 lines 1-7).

Specifically, Oprescu teaches a system having an electronic apparatus that is connected to several devices. Oprescu recognizes that not the devices need to be operated simultaneously. Oprescu reduces the amount of power consumed by the system by powering only necessary devices to perform an action. The number of devices is based on the combination of units because Oprescu prevents an overload of the power bus.

6. As to claim 6, Oprescu taught the electronic apparatus according to claim 1, as described above. Oprescu further teaches wherein the power source is a battery (battery 36) [figure 1].

7. As to claim 10, Oprescu taught the claimed electronic apparatus therefore he also taught the claimed power control apparatus.

8. As to claims 14 and 20, Oprescu taught the claimed electronic apparatus therefore he also taught the claim method for controlling a supply of power and the claimed judging apparatus.

Responses to Arguments with respect to Rejections of claims 1, 6, 10 and 14-15:

9. Applicant's arguments with respect to claims 1, 6, 10 and 14-15 filed 22 September 2004 have been fully considered but they are not persuasive.

This rejection is substantially similar that applied in the last office action. Applicants argue in substance that the examiner is making unsupported conclusory statements not in with understanding in the, and as such are unsupported taking of Offical Notice. The examiner disagrees with the Applicants. Responses to examples described by the applicant will be addressed below.

In applicant's first example, applicants argue in substance that Oprescu does not teach anywhere a judging part judging where a "combination" of plurality of units is to realize a desired function and that Oprescu merely teaches (col. 7, lines 50-55) " power usage request specify the identify of a device to be activated (a target device) and the operational status that is required for the device. The examiner disagrees. It is believe the applicants are referring to col. 7, lines 55-60 rather than col. 7, lines 50-55.

However, taking Oprescu a whole those will appreciate and understand the example in Oprescu. Oprescu discloses an example (col. 7 lines 63-67) where a CPU requires data to be stored on a disk drive (a combination of plurality of units to realize a function). In Oprescu, determining that a CPU requires data to be stored on a disk drive requires a plurality of units (namely at least the computer with a CPU and the disk drive itself). The system of Oprescu then determines how much power is required for function to be realized. Therefore, it is believed that

Oprescu does in fact teach a judging part (power manager 50 implemented using a processing unit of host 14, figure 1 and col. 5 lines 47-49).

Applicants argue, in another example, that Oprescu does not teach controlling a supply of power to at least one of the units of the combination used to realize the desired function based on a judgment result of the judging part, based on an aspect of said combination of the plurality of units. The examiner disagrees. However, Oprescu teaches controlling a supply of power the at least one of the units of the combination used to realize the desired function based on a judgment result of the judging part, based on an aspect of said combination of the plurality of units at col. 6, lines 15-20. Specifically, Oprescu teaches that a computer (one of the units) may have numerous power states that the power manager (judging part) must be aware of. Further, at col. 8, lines 43-46, Oprescu teaches that if power is not sufficient, additional power is used to increase power to allow operation of the device.

Applicants further argue in another example that Oprescu does not teach, reducing the amount of power consumed by the system by powering only necessary devices to perform an action. Further the applicants argue that such a statement is an unsupported conclusory statement. The examiner disagrees. Oprescu points to the fact that his system uses now uses less power thereby using a modest amount of power to operate a larger number of devices (col. 2, line 37 through col. 3 line 15). Specifically, the devices in Oprescu use power usage requests to a power manager. The power manager then controls the operation of devices to efficiently utilize the available power, which one of ordinary skill in the art will recognize this means powering only necessary devices to perform an action. Furthermore, Oprescu describes to the

example in which a printer turned off during storing of data (col. 8 lines 43-55). This shows a device that is not necessary is not powered.

Applicants further argue in another example that Oprescu does not teach, "obtaining information of a combination of the plurality of units", this recitation is not found in claims. The also examiner disagrees. Oprescu teaches at col. 8, lines 20-25, that the power manager determines (obtains) about how much power (information) is required for a request for specified operation (by the combination of a plurality of units such as storing information on a disk, which requires at least the host and disk drive). Therefore, Oprescu does teach obtaining information of a combination of the plurality of units.

Therefore, as set forth in the above arguments it is believed that the examiners reasons for rejections are in accordance with the standards as set forth necessary to support the combination of prior art references.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 4-5 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oprescu, in view of Chen, U.S. Patent 5,881,300 and Applicant's admitted prior art (AAPA).

12. As to claim 4, Oprescu taught the claimed electronic apparatus according to claim 1, as described above. Oprescu does not expressly disclose having PC cards to decode information read by a device unit. Oprescu does not expressly disclose wherein a type of PC card is

identified and said power supply control part stops the supply of power to the PC card when said judging part judges that said device unit does not use said PC card. In summary, Oprescu teaches a judging part that identifies a plurality of types device units and controls power to the device units accordingly. Oprescu does expressly disclose using PC cards. However, one skilled in the art would readily recognize that the system of Oprescu must have and use PC cards in order for the device units to communication with the electronic apparatus.

Chen teaches an electronic apparatus that stops supply of power to a PC card (PC card) when it is judged that the device unit does not use the PC card, stopping supply of power to the PC card [col. 3 lines 36-47 and col. 9 lines 60 through col. 10 lines 2].

AAAP teaches an electronic apparatus having a plurality of unit including at least one device unit reading information and at least one PC card decoding the information read by the device unit [page 3 lines 3-24].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Oprescu by implementing the PC card power control of Chen. Both systems are directed toward reducing power consumption in systems having peripheral device unit. Implementing the teachings of Chen would further reduce power consumed in a system, such as that of Oprescu, because Chen teaches reducing power consumption for a PC card. This reduction of power is desirable in Oprescu.

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Oprescu and Chen into the electronic apparatus as taught by AAPA because all apparatus are directed to control of a device unit. One of ordinary skill would have made the implementation because doing so would desirably reduce power consumption in

the apparatus of AAPA. AAPA states that a power to a PC card and device are completely wasted. The implementation of the teaching of Oprescu and Chen would desirably conserve power in the system of AAPA.

13. As to claim 5, Oprescu together with Chen and AAPA taught the claimed electronic apparatus according to claim 4. Chen teaches that the power supply control part should supply power to the PC card when it is judged that the PC card is used with the desired device unit as would normally be necessary to carry out a function of device unit. Chen teaches as set forth hereinabove a judging part that judges when said PC card is used with the desired device unit and the desired device unit is connected to the electronic apparatus to carry out a function of the device.

Oprescu together with Chen and AAPA does not expressly disclose wherein said power supply control part stops the supply of power to said PC card when said PC card is used with the desired device but the desired device is not connected to said electronic apparatus.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the teachings of Oprescu, Chen and AAPA by monitoring if a device is connected as, taught by Oprescu [col. 7 lines 39-44], and recognizing the new configuration without the device. Because the configuration would show that the device is no longer connected one of ordinary skill would have recognized that powering the PC card would waste power. One of ordinary skill would have recognized that the teachings of Chen would be implemented to stop the supply when there is no device to communicate to, thereby reducing unnecessary power consumption.

14. As to claim 16, Oprescu together with Chen and AAPA taught the electronic apparatus therefore they also teach the claimed method of operation.

15. As to claim 17, Oprescu together with Chen and AAPA taught the method according to claim 14 described above. Chen further taught controlling a supply of power (power is stopped) that supplies power to the PC card when a judging judges that said PC card is not used or used with a desired device unit (stopping usage of card when connected to a device) [col. 3 lines 36-47 and col. 9 lines 60 through col. 10 lines 2].

Oprescu together with Chen and AAPA does not expressly disclose wherein said controlling a supply of power stops the supply of power to said PC card when said PC card is used with the desired device but the desired device is not connected to the said electronic apparatus.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the teachings of Oprescu, Chen and AAPA by monitoring if a device is connected as, taught by Oprescu [col. 7 lines 39-44], and recognizing the new configuration without the device. Because the configuration would show that the device is no longer connected one of ordinary skill would have recognized that powering the PC card would waste power. One of ordinary skill would have recognized that the teachings of Chen would be implemented to stop the supply when there is no device to communicate to, thereby reducing unnecessary power consumption.

16. Claims 7-9, 11-13 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oprescu, in view of Hikawa, U.S. Patent 6,678,065 and Kurihara et al., U.S. Patent 5,721,937.

17. As to claim 7, Oprescu teaches an electronic apparatus (host device that is a portable computer, figure 1) connectable to a plurality of units (a disk drive and printer in figure 1) including at least one PC card slot and one driver unit (inherent to work with printer and disk drive). Oprescu further teaches a judging part (power manager, figure 1) judging whether a combination of at least two of said plurality of units and a power source controller part (power manager).

Oprescu does not disclose whether the combination of the at least two units is a predetermined combination. Oprescu also does not disclose the power source control part stopping a supply of power to at least one unit in the combination when said judging part judges that the combination is the predetermined combination.

Hikawa teaches an electronic apparatus having a combination of at least two units that is a predetermined combination (table as shown in figure 4 and col. 6 line 53 through col. 7 line 20). The system Hikawa is similar to that of Oprescu in that both systems determine what units are required to realize a function together and both also determine a priority to a function. Hikawa further teaches that the predetermined combination provides the advantage of improved operability and appropriately distributing resources when a plurality of requests arise simultaneously as well as method to provide control thereof (col. 2 lines 10-14). While Hikawa is directed toward an image forming device, those of ordinary skill would understand that the teaching of Hikawa would apply to any device that uses a plurality of units to realize a function.

Kurihara teaches power control for a unit wherein the power to the device is power up only when it is being used (driver is called up) and stops power to the unit when the unit is not required [col. 7 lines 35-44]. Kurihara provides the advantage of conserving considerable amounts of energy and reducing heat in the system.

It would have been obvious to one of ordinary skill in the art, having the teachings of Oprescu, Hikawa and Kurihara before them at the time the invention was made, to modify the judging part of Oprescu to include the predetermined combinations as taught by Hikawa and to include the stopping of power to at least one unit in a combination when it is not used as taught by Kurihara.

One of ordinary skill in the art would have been motivated to make this combination in order to obtain the advantage of improved operability in view of Hikawa and the advantage of conserving considerable amounts of energy in view of Kurihara.

18. As to claim 8, Oprescu together with Hikawa and Kurihara taught the electronic apparatus according to claim 7 as described above. As combined, Oprescu with Hikawa further a teaches that the judging part would comprise a table storing predetermined combinations of to of said plurality of units, and judging part would judge whether the combination is on of the predetermined combination based on the table.

19. As to claim 9, Oprescu together with Hikawa and Kurihara taught the electronic apparatus according to claim 7 as described above. Oprescu together Hikawa and Kurihara further teaches wherein said judging part would judge (power manager of Oprescu) whether or not a combination of said plurality (predetermined combinations of Hikawa) of said units is the predetermined combination when the electronic apparatus is turned on (on initialization

according to Oprescu, col. 7 lines 34). Specifically, when the electronic apparatus of the combination is turned on it would recognize which plurality of units is part of a predetermined combination.

20. As to claims 11-13 and 18-19, it is believed that Oprescu together with Hikawa and Kurihara, as set forth hereinabove, address the limitation according to claims 11-13 and 18-19.

Responses to Arguments with respect to Rejections of claims 4-5 and 16-17:

21. Applicant's arguments with respect to claims 4-5 and 16-17 filed 22 September 2004 have been fully considered but they are not persuasive.

Applicant argues in substances that Oprescu does not teach a judging part, but merely a CPU that transmits power usage requests. The examiner disagrees. As set forth in the arguments above it is believed that Oprescu teaches a judging part.

Applicant also argues in substance that Chen does not teach a judging part. The examiner agrees with the applicant. That is why reference to Oprescu is made to teach this limitation.

Applicant further argues in substance that Chen teaches, at col. 3, lines 35-40, "that a user explicitly designates(s)" of the use of the PC card and that a "user" does not teach a "part of an electronic apparatus". The examiner fully agrees with the applicants. However, the portion of Chen to which applicant refers is only one of Chen's embodiments. This particular embodiment describes a user having the ability to control power to a card. Three other embodiments of Chen do not require a user to control power to a card. Specifically, col. 3, lines 11-30, col. 3 line 48 through col. 4 line 17. Therefore, Chen does teach "part of an apparatus".

Responses to Arguments with respect to Rejections of claims 7-9 and 11-13:

Applicant's arguments, see page 13, the last three paragraphs before the Conclusion, filed 22 September 2004, with respect to the rejection(s)of claim(s) 7-9 and 11-13 under U.S.C. 103 (a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found references.

Conclusion

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James K. Trujillo whose telephone number is (571) 272-3677. The examiner can normally be reached on M-F (7:30 am - 5:00 pm) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James Trujillo
December 15, 2004

LYNNE H. BROWNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER ~~3600~~ 2100